

Claims

What is claimed is:

- 1 1. A method for implementing autonomous variation of media
2 dismount time in a robotic media library comprising the steps of:
3 monitoring I/O requests to the robotic media library,
4 gathering performance statistics for said I/O requests to the robotic
5 media library; and
6 periodically checking said gathered performance statistics to
7 determine a change value needed for the media dismount time.

- 1 2. A method for implementing autonomous variation of media
2 dismount time as recited in claim 1 wherein the step of monitoring I/O
3 requests to the robotic media library includes the step of maintaining an I/O
4 operations count.

- 1 3. A method for implementing autonomous variation of media
2 dismount time as recited in claim 1 wherein the step of gathering
3 performance statistics includes the steps of maintaining a media hit count
4 where a data storage medium (DSM) for said I/O request is in a robotic
5 media drive.

- 1 4. A method for implementing autonomous variation of media
2 dismount time as recited in claim 3 includes the steps of maintaining a media
3 near miss count where said DSM for said I/O request is in transit from said
4 robotic media drive.

- 1 5. A method for implementing autonomous variation of media
2 dismount time as recited in claim 2 wherein the step of periodically checking
3 said gathered performance statistics to determine said change value needed
4 for the media dismount time includes the step of identifying a first threshold
5 number of I/O requests, checking said gathered performance statistics to
6 determine if an increase is needed for the media dismount time.

1 6. A method for implementing autonomous variation of media
2 dismount time as recited in claim 5 includes the step of determining said
3 increase is needed for the media dismount time if the near miss count is
4 greater than the hit count; or if a ratio of the near miss count and hit count is
5 greater than a set value.

1 7. A method for implementing autonomous variation of media
2 dismount time as recited in claim 5 includes the step of identifying a second
3 threshold number of I/O requests, checking said gathered performance
4 statistics to determine if a decrease is needed for the media dismount time.

1 8. A method for implementing autonomous variation of media
2 dismount time as recited in claim 7 includes the step of determining said
3 decrease is needed for the media dismount time if the near miss count is
4 near zero, or if a ratio of the near miss count and hit count is less than
5 another set value.

1 9. Apparatus for implementing autonomous variation of media
2 dismount time in a robotic media library comprising:
3 a plurality of event counters;
4 a performance measurement media dismount time control program
5 for monitoring I/O requests to the robotic media library, for controlling said
6 event counters to maintain a count of I/O operations executed, a count of
7 media hits where a data storage medium (DSM) for said I/O request is in a
8 robotic media drive, and a count of media near misses where the DSM for
9 said I/O request is in transit from said robotic media drive; and
10 said performance measurement media dismount time control program
11 for periodically checking said counts of media hits and media near misses to
12 determine a change value needed for the media dismount time.

1 10. Apparatus for implementing autonomous variation of media
2 dismount time in a robotic media library as recited in claim 9 wherein said
3 performance measurement media dismount time control program for
4 periodically checking said counts includes said performance measurement
5 media dismount time control program identifying a first threshold number of
6 I/O requests, checking said counts of media hits and media near miss to
7 determine if an increase is needed for the media dismount time.

1 11. Apparatus for implementing autonomous variation of media
2 dismount time in a robotic media library as recited in claim 10 wherein said
3 performance measurement media dismount time control program increases
4 the media dismount time if the near miss count is greater than the hit count,
5 or if a ratio of the near miss count and hit count is greater than a set value.

1 12. Apparatus for implementing autonomous variation of media
2 dismount time in a robotic media library as recited in claim 10 wherein said
3 performance measurement media dismount time control program for
4 periodically checking said counts includes said performance measurement
5 media dismount time control program identifying a second threshold number
6 of I/O requests, checking said counts of media hits and media near miss to
7 determine if a decrease is needed for the media dismount time.

1 13. Apparatus for implementing autonomous variation of media
2 dismount time in a robotic media library as recited in claim 12 wherein said
3 performance measurement media dismount time control program decreases
4 the media dismount time if the near miss count is near zero, or if a ratio of
5 the near miss count and hit count is less than a set value.

1 14. A computer program product for implementing autonomous
2 variation of media dismount time in a robotic media library in a computer
3 system, said computer program product including instructions executed by
4 the computer system to cause the computer system to perform the steps of:
5 defining a set of event counters;
6 monitoring I/O requests to the robotic media library,
7 controlling said event counters to maintain a count of I/O operations
8 executed, a count of media hits where a data storage medium (DSM) for
9 said I/O request is in a robotic media drive, and a count of media near
10 misses where the DSM for said I/O request is in transit from said robotic
11 media drive; and
12 periodically checking said counts of media hits and media near
13 misses to determine a change value needed for the media dismount time.

1 15. A computer program product for implementing autonomous
2 variation of media dismount time as recited in claim 14 wherein the step of
3 periodically checking said counts of media hits and media near misses to
4 determine a change value needed for the media dismount time includes the
5 steps of identifying a first threshold number of I/O requests, checking said
6 counts of media hits and media near miss to determine if an increase is
7 needed for the media dismount time.

1 16. A computer program product for implementing autonomous
2 variation of media dismount time as recited in claim 15 wherein the step of
3 checking said counts of media hits and media near miss to determine if an
4 increase is needed for the media dismount time includes at least one step of
5 checking if the near miss count is greater than the hit count or checking if a
6 ratio of the near miss count and hit count is greater than a set value.

1 17. A computer program product for implementing autonomous
2 variation of media dismount time as recited in claim 15 includes the steps of
3 identifying a second threshold number of I/O requests, checking said counts
4 of media hits and media near miss to determine if a decrease is needed for
5 the media dismount time.

1 18. A computer program product for implementing autonomous
2 variation of media dismount time as recited in claim 17 wherein the step of
3 checking said counts of media hits and media near miss to determine if a
4 decrease is needed for the media dismount time includes at least one step
5 of checking if said near miss count is near zero or checking if a ratio of the
6 near miss count and hit count is less than a set value.